

## Trig. Review 3.1-3.5

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Suppose that  $\theta$  is in standard position and the given point is on the terminal side of  $\theta$ . Give the exact value of the indicated trig function for  $\theta$ .

1)  $(18, 24)$ ; find  $\sin \theta$ . 1) \_\_\_\_\_

Determine the sign (positive or negative) of the given value without use of a calculator.

2)  $\sin \frac{4\pi}{3}$  2) \_\_\_\_\_

Use the arc length formula and the given information to find the indicated quantity.

3)  $r = 14$  in.,  $\theta = 3$  rad; find  $s$  3) \_\_\_\_\_

Give the exact value.

4)  $\sin \frac{\pi}{6}$  4) \_\_\_\_\_

5)  $\csc 30^\circ$  5) \_\_\_\_\_

6)  $\tan 30^\circ$  6) \_\_\_\_\_

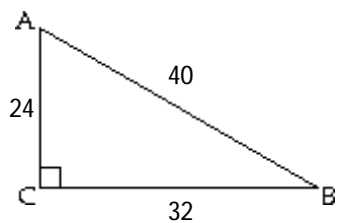
Solve the problem.

7) The radius of a car wheel is 13 inches. How many revolutions per minute is the wheel making when the car is travelling at 50 mph. Round your answer to the nearest revolution. 7) \_\_\_\_\_

8) Find all values of  $x$ , in the interval  $[0, 2\pi)$ .  
 $\sin x = -1/2$  8) \_\_\_\_\_

Find the exact values of the indicated trigonometric functions. Write fractions in lowest terms.

9)



9) \_\_\_\_\_

Find  $\sin A$  and  $\cos A$ .

Solve the equation.

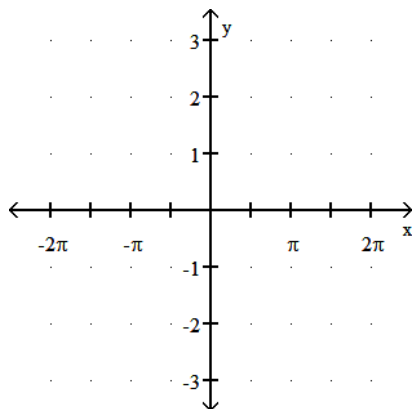
10) Solve  $\cos \theta = \frac{1}{2}$  for  $\theta$ , where  $0^\circ \leq \theta \leq 90^\circ$ .

10) \_\_\_\_\_

Find the amplitude, period, phase shift, and vertical shift then graph one period of the function.

11)  $f(x) = -2 \cos(2x + \pi) + 1$ .

11) \_\_\_\_\_



Solve for  $x$  in the given interval.

12)  $\csc x = -\sqrt{2}$ ,  $\frac{3\pi}{2} \leq x \leq 2\pi$

12) \_\_\_\_\_

Describe the transformations required to obtain the graph of the function  $f(x)$  from the graph of the function  $g(x)$ .

13)  $f(x) = -5 \cos 7x$ ;  $g(x) = \cos x$

13) \_\_\_\_\_

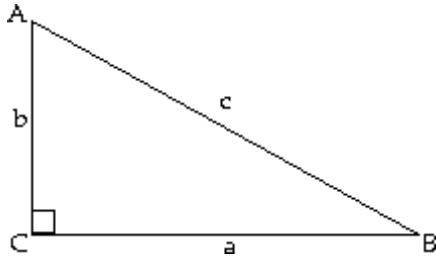
Assume that  $\theta$  is an acute angle in a right triangle satisfying the given conditions. Evaluate the indicated trigonometric function.

14)  $\sin \theta = \frac{2}{3}$ ;  $\cos \theta$

14) \_\_\_\_\_

Solve the right triangle for all missing sides and angles to the nearest tenth.

15)



$c = 16$   
 $B = 40^\circ$

15) \_\_\_\_\_

Evaluate without using a calculator by using ratios in a reference triangle.

16)  $\sin \frac{5\pi}{6}$

16) \_\_\_\_\_

Evaluate without using a calculator.

17)  $\sin \theta$ , if  $\cos \theta = \frac{4}{7}$  and  $\tan \theta < 0$

17) \_\_\_\_\_

Convert the radian measure to degree measure.

18)  $\pi/4$

18) \_\_\_\_\_

Convert from degrees to radians.

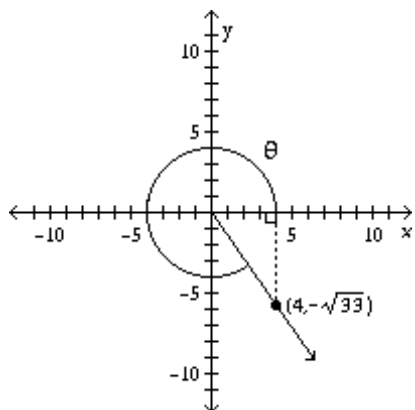
19)  $135^\circ$

19) \_\_\_\_\_

Find the trigonometric function value for the angle shown.

20)  $\cos \theta$

20) \_\_\_\_\_

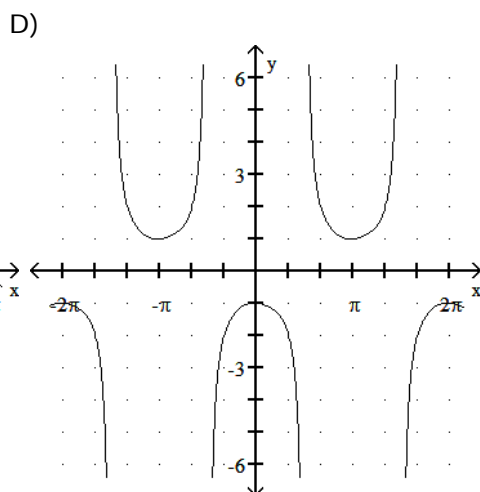
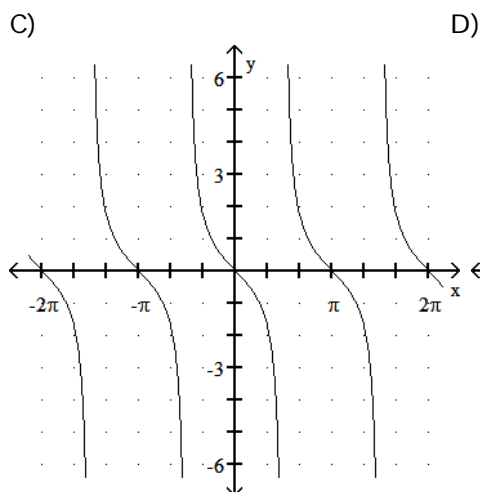
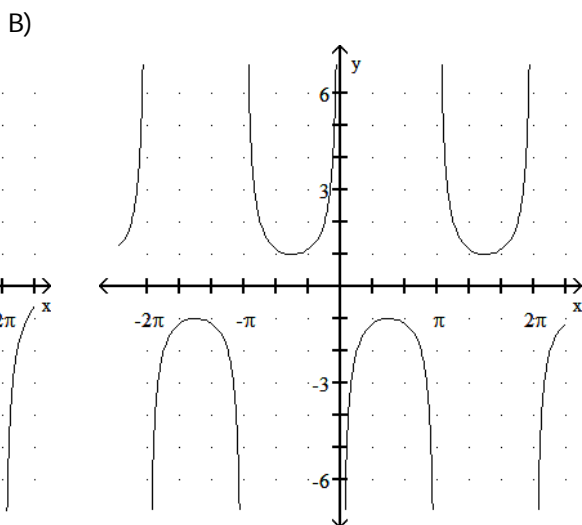
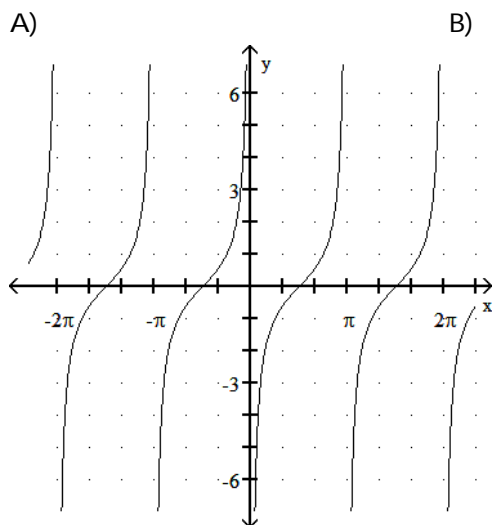


MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Match the function with its graph.

- 21) 1)  $y = -\csc x$       2)  $y = -\sec x$   
 3)  $y = -\tan x$       4)  $y = -\cot x$

21) \_\_\_\_\_



A) 1A, 2D, 3C, 4B

B) 1C, 2A, 3B, 4D

C) 1B, 2D, 3C, 4A

D) 1A, 2B, 3C, 4D